Mercury Advisory Committee Meeting #3
Thursday, November 21, 2002

Meeting Summary

Introduction

The Mercury Advisory Committee (committee) met for the third time on November 21, 2002 at the US Environmental Protection Agency, Region 10 office in Seattle. Members of the committee as well as individuals from various public and special interest groups attended the meeting (a complete list of attendees is attached). The purpose of this meeting was to (1) provide an overview of comments received on the draft Mercury Chemical Action Plan (MCAP), (2) provide recommendations from the Department of Ecology (Ecology) for modifications to the MCAP, and (3) hear feedback from committee members on Ecology's proposed recommendations.

This summary is not a comprehensive set of meeting minutes. Rather, it captures the highlights of points discussed, and more specifically, focuses on accurately summarizing feedback from committee members on the comments received and recommendations set forth by Ecology.

Following meeting participant introductions, facilitator Lane Nothman from Ross & Associates emphasized the meeting was intended to be a working session and an opportunity to actively engage, and gain input from, committee members.

Goals and Purpose of the Meeting

Bill Backous, Manager of Ecology's Environmental Assessment Program, within which the work on Persistent Bioaccumulative Toxins (PBTs) occurs, introduced the goals and purpose of the meeting by presenting background on the overall MCAP effort. Mr. Backous stated that mercury is recognized as a global health and environmental issue because of its transport through the atmosphere and fate within ecosystems. Within this context, Ecology is committed to playing its part in solutions to address this issue. The MCAP process, which is the first in a series of PBT chemical action plans, has brought forward a diverse array of perspectives, all of which Ecology and the Department of Health must now consider in creating a final action plan. Mr. Backous explained that Ecology would present its current thinking on detailed priorities and plans for implementation and that the meeting would serve as an opportunity for committee members to help refine these priorities and plans.

Summary of Comments Received and Ecology's Proposed Recommendations for MCAP Implementation

Mike Gallagher, Ecology's PBT Coordinator, introduced this portion of the agenda by clarifying that Ecology was not attempting to summarize all comments received. Instead, the presentation was intended to indicate the range of comments received. Mr. Gallagher also added that committee members should highlight particularly important comments and/or comments that are not represented in the presentation. Cheri Peele, Mercury Policy Coordinator for Ecology, directed meeting participants to a spreadsheet of information that would be the basis for her presentation on the Department's current and planned activities for addressing the mercury sources identified in the MCAP. The following sections focus on discussion by the committee on the information presented and specific comments from Ecology not included in the materials distributed to meeting participants. For the complete presentation on comments

received and the spreadsheet of current and planned action plan activities, see http://www.ecy.wa.gov/programs/eap/pbt/mercuryplan.html.

Questions Related to MCAP Funding
Throughout the course of the presentation by Ecology, some questions were raised that related to the overall MCAP and its funding. In the spreadsheet of mercury source strategies, items highlighted in yellow represent priority strategies to which approximately $530,000 of specific mercury funding will be applied. The columns titled "would require additional funding" are important strategies but ones that are not currently planned to receive funding. Within these additional funding columns, items in blue text are the highest priority. Linda Hoffman, Deputy Director for Ecology, responded to budget related questions by specifying that a more detailed MCAP budget could be made available if desired by committee members.

Coal Fired Power Plants
A question was raised about the inclusion of industry comments on fossil fuels as a source for mercury emissions. Mr. Gallagher specified that the Department did receive and recognize comments from Transalta, a private utility, in regards to coal fired power plant mercury emissions. One committee member emphasized the importance of the comment received by Ecology asserting that the department should not wait for federal regulations requiring mercury reduction from coal plants.

Fuel Oil
No specific comments were received by Ecology on Fuel Oil and Oil Refineries. Committee members had no additional comments to present at the meeting.

Wood Stoves and Boilers
A committee member questioned why Ecology had not followed up on work on the Reasonable Available Control Technology process that was started in 1998/99, and stated that this process should be continued to address emissions from hog fuel boilers.

Mining
A committee member specified that before prioritization of mining sites can occur, Ecology must have better methods for assessing where the abandoned mines in the state actually are. A question was raised on placer gold mining regarding the source of mercury found in streams. Mr. Gallagher confirmed that this mercury does come from past mining operations since mercury does not occur naturally in its elemental form. Some small scale prospectors that collect this mercury as a side product have offered to coordinate with Ecology to remove mercury from streams as a public service.

Manufacturing
Ecology specified that part of the strategy of investigating alternatives to mercury in manufacturing processes would include identification of specific facilities that may have an opportunity to reduce mercury use. One committee member asked whether the Department would include a cost-benefit type analysis as part of the recommendations. Ms. Peele answered that the MCAP will not go to a level of detail that will include cost-benefit analysis for specific strategies.

Thermometers
Based in part on the comments received by Ecology, the committee debated the merits of recycling mercury thermometers. Once thermometers are collected, they are transported to a hazardous waste management company, which then recycles the mercury for reuse. Some stated that recycling these products allows the mercury contained in them to be placed back on the market and that until plans are made for long term disposal, it may be better to dispose of thermometers in landfills. Others noted that collection and recycling of mercury thermometers is an important first step in being able to actively track

and manage mercury in preparation for long term disposal in the future. Ecology confirmed that the issue of a long term management strategy is a critical topic of discussion within the draft action plan, as well as between the federal government and states.

Thermostats
Committee members had few additional comments on thermostats. Some clarification was requested on the Thermostat Recycling Corporation (TRC). TRC, a not-for-profit corporation owned by three National Electrical Manufacturing Association member companies, facilitates the collection by Heating, Ventilation, and Air Conditioning (HVAC) wholesalers of all brands of used, wall-mounted mercury-switch thermostats so that the mercury can be purified for re-use.

Batteries
Committee members discussed ways in which batteries are recycled. Some cities, such as Seattle, accept them at household hazardous waste facilities. Dave Hufford from the City of Tacoma explained that the thermostat collection system that Tacoma is working to implement at Lowe's and Home Depot hardware stores is an example of how recycling systems must be cost effective and convenient in order to succeed.

HVAC Equipment
Committee members had no additional comments to present on HVAC equipment.

Fluorescent Lamps
It was recommended that Ecology's strategy to enhance fluorescent lamp recycling through improved compliance with the Universal Waste Rule should focus on large quantity generators since these generators are required to recycle fluorescent lamps. One committee member also stated that lamps should be a higher priority since they should already be managed properly.

Vehicle Convenience Light Switches
Greg Dana from the Alliance of Auto Manufacturers, explained that he spent much of last year working with the Michigan Department of Environmental Quality on a program to assess the portion of its vehicle fleet with mercury switches and the cost of switch removal. Mr. Dana offered to send this report to Ecology when it is completed.

Medical Facilities
Dr. Sandy Rock explained that while the comments submitted to Ecology express support for collaboration between the Washington State Hospital Association (WSHA) and other groups to encourage hospitals to eliminate mercury, there are some products for which substitutes are difficult to find, such as biliruben lamps. Biliruben lamps produce wavelengths of light that are effective in preventing biliruben in newborn babies. One committee member encouraged Ecology follow the example of the memorandum of understanding (MOU) between the State of Maine and that state's hospital association that includes limits on PVC as well as mercury.

Dental Facilities
Ecology specified that the draft MCAP was written with the assumption that the state did not have the authority to require the use of amalgam separators and best management practices. However, the Department has determined that this authority does exist. The MCAP strategy was therefore modified to say that following the end of a two year period, dentists would be required to comply with pertinent Ecology regulations. Some committee members questioned Ecology's rationale for not immediately enforcing the law and requiring the use of amalgam separators, asserting that only mandatory programs will achieve compliance. Others said that the MOU between Ecology and the dental association was an appropriate place to start. Several committee members emphasized that preventing mercury from entering the waste stream at dental facilities was a good opportunity for mercury pollution prevention.

K-12 Schools and Universities
Committee members had no additional comments to present on K-12 Schools and Universities.

State Purchasing
A committee member asked Ecology whether or not the ongoing strategy to reduce the state's use of mercury products has been effective. Ms. Peele responded that the strategy is intended to identify opportunities for reduction as products are purchased, so that while there are mercury products still in use by the state, preference has been given to mercury free products as purchasing contracts have arisen. Support was voiced for a state purchasing program that would go beyond voluntary measures by requiring the state to purchase non mercury products.

Solid Waste Combustion
Committee members commented that the most effective way to prevent mercury from being incinerated in solid waste is to prevent mercury from entering the waste stream in the first place.

Landfills
Committee members had no additional comments to present on Landfills.

Autoclaves
A summary of comments received by the department on autoclaves was accidentally not included in the presentation materials given to meeting participants. Mr. Gallagher verbally summarized these comments. Comments said that Ecology should take enforcement actions to prevent disposal of mercury in autoclave facilities, and that mercury waste should be separated from "red bag" waste in order to accomplish this. Ecology stated that the medical waste facility permit template that is used by local health departments, and proposed as a vehicle for requiring that medical waste facilities not accept mercury, will be up for renewal in the 05-07 biennium. Meeting participants said that the difficulty of knowing whether or not mercury is present in "red bag" waste is a strong case for source reduction. Others commented that autoclaves do have a responsibility for the content of the waste in their facilities and that monitoring for mercury, similar to that for radioactive content, could be implemented.

Publicly Owned Treatment Works (POTW)
Several committee members commented that the best way to address mercury in POTWs is source reduction. Ecology was asked why it does not consider the global sources of mercury in the action plan, and how these sources may contribute to mercury in waste water. Mr. Gallagher responded that he believes the plan does acknowledge global sources of mercury, but that the action plan focuses on actions to reduce sources originating within the state. One committee member voiced concern that Ecology's strategy of waiting to consider eliminating POTW mixing zones until the next round of regulatory review would not be effective in achieving reductions. In response to Ecology's strategy to provide outreach material to septic pumping firms for distribution to customers, one committee member suggested that this activity should be undertaken sooner than the indicated 05-07 biennium.

Sewage Sludge Incinerators
A committee member commented that the pollution prevention strategy for addressing mercury emissions from sewage sludge incineration is inadequate because it fails to recognize the fact that mercury will not be totally eliminated from sewage. A better strategy would be to stop the incineration of sewage sludge.

Crematoria
Ann Burgman, representing crematoria, encouraged Ecology to establish more appropriate standards that are in line with those set by the EPA for crematoria. She asserted that standards proposed in response to a recent permit application to Ecology by a crematorium were unattainable.

Household Hazardous Waste
In light of the Department's strategy to work with the Environmental Council of the States Quicksilver Caucus to develop proposals for long-term mercury management infrastructure, Lauren Cole from King County asked if there would be opportunities for local government involvement in the Quicksilver Caucus. Ms. Peele said she would follow up with Ms. Cole regarding that possibility.

Toxic Waste Cleanup Sites
Ecology explained that one change to Model Toxics Control Act (MTCA) procedures is to track mercury as a specific contaminant, since contamination is often tracked along with other unspecified metals. One committee member voiced concern that the description of cleanup and the listing of MTCA in the action plan made the assumption that these activities are effectively reducing mercury waste. The action plan should recognize the impact that a one million dollar decrease in the cleanup budget will have.

Fish Advisories
Committee members discussed comments related to fish advisories and the fact that the statewide fish advisory from the Department of Health (DOH) lists five fish that are not native to Washington. One committee member stated that the listing of five non-native fish was inconsistent with Ecology's focus on sources of mercury from inside the state. Dave McBride, from DOH, said that the listing of only five fish is more a function of incomplete examination of fish from around the state than it is a sign that only non-native fish contain mercury. Committee members mentioned support for better coordination between agencies such as DOH, Ecology, and the Washington Department of Fish and Wildlife in developing more complete fish advisories.

Mercury Products Legislative Strategy
At the end of the presentation on comments received on the draft MCAP, Ecology presented one slide that summarized the Department's planned approach to a legislative strategy to address mercury products. The strategy, to be implemented for the 03-05 biennium, will aim to promote and support principles of product stewardship, product labeling, bans on the use of mercury in products (where clearly and immediately unnecessary), and phase outs of other unnecessary uses of mercury in products. Ecology was asked to clarify the meaning of "principles for product stewardship." Ms. Peele responded that these principles are found in the legislation from Northeastern states that is being used as a framework for legislation in Washington. Product stewardship means that manufacturers would be responsible for developing mercury collection processes. Committee members discussed the proposed legislative strategy to ban the use of mercury in products where that use is clearly and immediately unnecessary. Ecology was asked when the list of these uses of mercury would be available for review. Several committee members voiced an interest in reviewing this list and participating in its development. Ecology specified that a determination of when a use of mercury is "clearly and immediately unnecessary" would be based in part on mercury bans implemented by other states, such as those prohibiting the purchase of elemental mercury by K-12 schools. Ecology was encouraged to pursue bans on certain products to support efforts to implement bans at the local government level. The Department was also reminded that the Mercury Disposal and Reduction Act was just passed by the US Senate. Committee members stated that Ecology should follow the progress of this bill. (The bill is currently in committee in the US House.)

Overall Feedback on MCAP
In light of the specific comments received by the department, Mr. Backous asked meeting participants to give Ecology any other comments or general feedback on the direction of the MCAP. Committee

members responded by discussing the state's limited resources during the current and upcoming biennia and the impact that this situation may have on mercury reduction strategies. Representatives on the committee from local government asserted that expansion of any programs is extremely unlikely with current funding levels, and that the state will be focusing simply on maintaining current activities. It was suggested that Ecology look for alternative funding sources, such as grants and fees. Ms. Hoffman stated that while alternative funding is always a consideration, the state's political climate is not conducive to raising fees. However, Ecology is continually examining grant opportunities. Committee members also voiced support for bans on novelty items in the MCAP, emphasized the urgency for overall action that should be passed onto the Legislature given the persistent damage inflicted by mercury, and encouraged Ecology to enforce existing laws.

Measures for Success

Following discussion of comments received by Ecology, Mr. Gallagher presented the following list of factors that will be used to judge the success of the MCAP as it is implemented. Total future mercury reduction resulting from these actions is roughly estimated to be 753-1261 pounds per year. Mr. Gallagher emphasized that this is a preliminary figure only, and that the Department will be working to refine the estimate.

- Installation of amalgam separators
- Collection of elemental Hg in schools, dental, thermometer
- Absence of mercury in red bags going to autoclaves
- Reduction in mercury load going to sewage sludge to incinerators
- Improvement in fluorescent light tube recycling
- Reduction in coal fired power plant emissions.

Mr. Gallagher clarified that fluorescent lamp recycling includes lamps from commercial, residential, and industrial sources. Committee members discussed the implications of cost-benefit analysis based on the estimated pounds per year reduction resulting from these measures. It was suggested that these numbers could be compared to the total amount of releases in the state to determine whether the costs of these activities were achieving a proportional benefit in mercury reductions. It was also noted that the benefit of reduced mercury in the environment, because of its persistent, bioaccumulative properties, is very hard to measure.

Feedback on MCAP Development Process

Mr. Backous solicited input from committee members on whether or not they were interested in meeting again to evaluate the MCAP development process, given the fact that the process will serve as a model for other chemical action plans. Only a few committee members voiced an interest in meeting again to discuss the process; most supported an email or written survey. Ecology will use feedback from committee members to create a report assessing the MCAP process.

Comments from other interested parties

Non-committee members attending the meeting were given an opportunity to offer comments to the committee. These comments are summarized below.

John Rogers related his personal experience of having mercury removed from his body. He voiced displeasure that there was any question about the seriousness of the issue of mercury, and stated that the

American Dental Association was part of the problem. He emphasized the significant responsibility of the committee in developing this chemical action plan.

Mary Ann Newell, from the Mercury Awareness Team, explained that she became involved in mercury awareness advocacy through a personal encounter with mercury poisoning. She stated that the two year voluntary program to implement the use of amalgam separators in dental facilities should be mandatory, and urged the state to follow examples set by legislative action in Maine. Ms. Newell also stressed that information regarding fillings can be misleading and that fillings often referred to as silver are actually composed of more mercury than silver.

Ann Clifton, from the Mercury Awareness Team, offered World Health Organization data showing that exposure through dental amalgam was greater than through fish. She reiterated the importance of source reductions in eliminating exposure, and stressed the dangers posed to pregnant women and children under the age of six.

Darleen Johnson told a personal story of poisoning from mercury fillings. She explained how she suffered from increasing memory loss, until it finally began to have a significant impact on her ability to perform her job. After she was diagnosed and treated, her symptoms retreated. Ms. Johnson voiced her disappointment that the representatives from the dental community were absent for this portion of the meeting.

Christy Diemond, from the Mercury Awareness Team, commended Ecology on their efforts in putting together a good chemical action plan. Ms. Diemond had an experience with mercury poisoning similar to others and now makes documentary films about mercury-related information that has been kept from the public.

John Moore, a mercury researcher from the Mercury Awareness Team, reminded committee members of the serious effects of mercury that have caused problems such as those in Minamata Bay, Japan. Mr. Moore explained that he was poisoned and almost died from mercury. He urged the committee to focus on the benefits of reducing mercury in the environment.

Sue Satermo told her personal story of mercury poisoning and said that since having her mercury fillings removed, many symptoms, both emotional and physical, have subsided. She thanked the committee for their efforts on an important issue.

James Noel, from the Washington State Funeral Directors Association, said that because crematoria operators have no way of knowing if a body has amalgam fillings, there is no reason to regulate emissions from crematoria. The only way to eliminate mercury emissions would be to eliminate cremation as an option.

Wrap Up and Next Steps

Mr. Gallagher reminded committee members that the MCAP would be distributed to the Legislature at the end of January. Ms. Hoffman concluded the meeting with thanks to the committee members for active and respectful participation over the course of the meeting, as well as through the written comments submitted on the draft MCAP. While recognizing the many divergent opinions, she stressed that no one was claiming that mercury reduction was not important. Some issues still must be resolved as Ecology develops the final action plan including funding, the level of mandatory programs versus voluntary programs, and the precise role that the state should play in addressing the global issue of mercury. She committed the Department to careful consideration of comments received and gave thanks again to committee members for their participation in the process. The meeting then adjourned.